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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,314	11/29/2000	Masaharu Amano	001337	8583

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ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP
1725 K STREET, NW
SUITE 1000
WASHINGTON, DC 20006

EXAMINER

MAMMEN, NATHAN SCOTT

ART UNIT PAPER NUMBER

3671

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/725,314

Applicant(s)

AMANO ET AL.

Examiner

Nathan S Mammen

Art Unit

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MW

-- The MAILING DATE f this communication appears on th c ver sheet with the correspondenc address --
Peri d f r R ply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Pri rity under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 3-6, 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As amended, claim 1 conflicts with the invention described in the specification. Claim 1 now states "said one face side, bolted in a state where said one face side is positioned on the bucket lip side, becomes a concave face during action of said axial force fluctuation absorbing means." (Emphasis added.) The specification states: "In the present invention, the axial force fluctuation absorbing means allows the bucket tooth to generate a resilient return force by causing a warp by resilient deformation so that one face side becomes a concave face and performing bolting in a state where the one face side is positioned on the bucket lip side." Specification, pages 3-4 (emphasis added). The conflict between the claim and the specification is that the claims suggests the face becomes concave because of the axial force fluctuation means when the bucket tooth is bolted on the bucket, whereas the specification discloses that the concave face is a part of the axial force fluctuation means and is present before the bucket tooth is bolted on the bucket.

Claim 5 also is indefinite because of language that conflicts with the invention described in the specification. Claim 5 recites "said axial force fluctuation absorbing means provides said resilient return force during said fluctuations in axial force by causing a warp to occur...."

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(Emphasis added.) As stated previously, the specification teaches that the warped bucket tooth is a component of the axial force fluctuation means, not a derivative thereof.

In view of the above rejections under 35 U.S.C. 112, the claims as best understood, are treated in the following art rejections.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by GB 2,176,520.

The GB '520 patent discloses an assembly for attaching a bucket tooth to a bucket lip.

The bucket tooth (2) has a concave face. The concave face is positioned on the bucket lip (1).

Due to the inherent properties of the bucket tooth material, the bucket tooth absorbs the axial force fluctuations of the fastening bolts.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2,176,520.

The GB '520 patent discloses the claimed invention, as stated in paragraph 4 above, except for the amount of warp. However, the amount of warp would have been obvious, since the deflection of the bucket tooth is dependent upon the force applied.

7. Claims 4-6, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2,176,520 in view of Rose et al. (U.S. Patent 4,958,970), cited in previous office actions.

The GB '520 patent discloses the claimed invention, as stated in paragraph 4 above, except for the bolt hole being spot faced. The Rose '970 patent teaches that it is known in the art at the time the invention was made to spot face an element on the side facing the surface to which it is to be bolted. It would have been obvious to one having ordinary skill in the art at the time the invention was made to spot face the bucket tooth of the GB '520 patent in order to provide an improved connection and force absorption means.

Regarding claims 6 and 16: The range of the ratio of depth of spot facing to the diameter would have been an obvious matter of design choice since, when the general properties of a claim are known, optimizing the ranges of result-effective variables involves only routine skill in the art. In re Aller, 105 USPQ 233 (1955).

Response to Arguments

8. Applicant's arguments filed 12/11/03 have been fully considered but they are not persuasive.

In claim 1, Applicant has not claimed anything more than is present and inherent in the prior art. First, Applicant's claims suffer from being in conflict with what is disclosed in the specification as the invention. The bucket tooth is warped to become concave during manufacturing, not during bolting. Second, Applicant claims that the axial force fluctuation

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absorbing means “provides a resilient return force.” It is an inherent property of the metallic materials from which bucket teeth are constructed that they have elastic properties. See, e.g., Marks Mechanical Engineering Handbook, Fig. 5.1.2 and Table 5.1.1. When a load is placed on these materials, the materials will first deform elastically – which means that they will also have a return force component acting to resist the load. Thus, the inherent properties of the materials absorb axial forces through the elastic range. Claiming an inherent property of a known structure or material does not render a claim patentable. See, e.g., *Titanium Metals Corp. of Am. v. Banner*, 778 F.2d 775 (Fed. Cir. 1985); *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Mammen whose telephone number is (703) 306-5959. The examiner can normally be reached Monday through Thursday from 6:30 a.m. to 5:00 p.m.

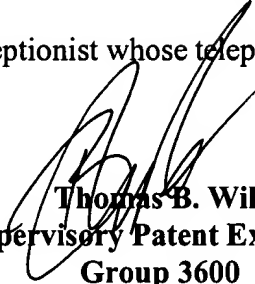
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached at (703) 308-3870. The fax number for this Group is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-1113.



Thomas B. Will
Supervisory Patent Examiner
Group 3600

NSM
03/01/04

Nathan S. Mammen